

CLAIMS

What is claimed is:

- 1 1. A method of initiating a communication session comprising:
2 determining a cost estimate of the communication session based on a quality
3 of service level and a quantity of information to be communicated; and
4 initiating the communication session after the cost estimate is determined.

- 1 2. The method as claimed in claim 1 wherein the quality of service level is a
2 first quality of service level, and wherein the cost estimate is a first cost estimate, the
3 method further comprising:
4 providing the first cost estimate of the communication session to a user of a
5 wireless communication device;
6 allowing the user to select a second quality of service level for the
7 communication session when the first cost estimate is not accepted;
8 providing a second cost estimate of the communication session to the user
9 based on the second quality of service level and the quantity of information; and
10 initiating the communication session when either the first or second cost
11 estimate is accepted.

- 1 3. The method as claimed in claim 1 further comprising:
2 receiving data corresponding to the quality of service level desired by a user;
3 and
4 determining network capabilities from a communication network, the network
5 capabilities comprising available quality of service levels and cost of service
6 information,
7 and wherein determining the cost estimate includes estimating a content
8 amount to determine the quantity of information to be communicated, the cost
9 estimate being based on the estimated content amount and cost of service information

10 for an available quality of service level substantially corresponding with the data
11 received by the user.

1 4. The method as claimed in claim 3 wherein determining network capabilities
2 comprises interrogating a plurality of communication networks to determine available
3 quality of service levels and cost of service information for each communication
4 network of the plurality.

1 5. The method as claimed in claim 3 wherein determining network capabilities
2 comprises retrieving available quality of service levels and cost of service
3 information for a plurality of communication networks from a memory of a wireless
4 communication device.

1 6. The method as claimed in claim 1 further comprising:
2 comparing user credit availability information with the cost estimate for the
3 communication session; and
4 initiating the communication session when the cost estimate is not greater than
5 a predetermined percentage of the user credit availability information.

1 7. The method as claimed in claim 6 wherein comparing the user credit
2 availability information comprises comparing user credit availability information
3 stored in a smart card readable by the wireless communication device.

1 8. The method as claimed in claim 6 further comprising the step of:
2 refraining from initiating the communication session when the cost estimate
3 exceeds the user credit availability information;
4 notifying a user when the cost estimate exceeds the user credit availability
5 information; and

6 allowing the user to select a different quality of service level for the
7 communication session when the cost estimate exceeds the user credit availability
8 information.

1 9. The method as claimed in claim 1 wherein the quality of service level is
2 comprised of data rate information, error rate information and packet priority
3 information.

1 10. The method as claimed in claim 1 further comprising mapping the
2 information into one of a plurality of information content classes selected from a
3 group including a conversational content class, a streaming content class, an
4 interactive content class and a background content class, and
5 wherein the quality of service level is based on the selected information
6 content class.

1 11. The method as claimed in claim 1 wherein the quality of service level is a
2 desired quality of service level for a user, the method further comprising:
3 determining the desired quality of service level by prompting the user to select
4 one of a plurality of a quality of service levels;
5 using the selected quality of service level to provide the cost estimate; and
6 receiving an input from the user to either reject or accept the cost estimate.

1 12. The method as claimed in claim 1 wherein the quality of service level is a
2 desired quality of service level for a user, the method further comprising:
3 determining the desired quality of service level by retrieving the desired
4 quality of service level from a smart card coupled with a wireless communication
5 device;
6 using the desired quality of service level to provide the cost estimate; and
7 receiving an input from the user to either reject or accept the cost estimate.

1 13. The method as claimed in claim 1 wherein a packet radio service network
2 that provides packet data services to wireless communication devices in accordance
3 with a packet data protocol (PDP),
4 wherein a wireless communication device is assigned a PDP address for
5 communicating with the packet radio network during a plurality of communication
6 sessions, wherein the quality of service level is a first quality of service level, the
7 method further comprising:
8 communicating during a first of the communication sessions at the first
9 quality of service level; and
10 communicating during a second of the communication sessions at a second
11 quality of service level.

1 14. The method as claimed in claim 13 wherein a first content type is
2 communicated during the first of the communication sessions at the first quality of
3 service level, and a second content type is communicated during the second of the
4 communication sessions at the second quality of service level.

1 15. The method as claimed in claim 13 wherein the first quality of service
2 level has a first cost of service associated therewith, and the second quality of service
3 level has a second cost of service associated therewith, and the method further
4 comprises:
5 providing the cost estimate to a user for the communication session to
6 communicate a first content type based on the first cost of use and a quantity of
7 information to be communicated; and
8 receiving an input from the user to either reject or accept the cost estimate.

1 16. A method of providing cost of quality of service information to a user of a
2 wireless communication device in a packet radio service network comprising:
3 allowing a user to select a quality of service level at the wireless
4 communication device for a communication session; and

5 providing the user a cost estimate for the communication session based on the
6 selected quality of service level.

1 17. The method as claimed in claim 16 wherein the cost estimate is a first cost
2 estimate, the method further comprising:
3 determining the first cost estimate by the wireless communication device for
4 the communication session based on the selected quality of service level and a
5 quantity of information to be communicated during the communication session; and
6 allowing the user to select a second quality of service level when the first cost
7 estimate is not accepted.

1 18. The method as claimed in claim 17 further comprising:
2 providing a second cost estimate of the communication session to the user
3 based on the second quality of service level and the quantity of information; and
4 initiating the communication session when either the first or the second cost
5 estimate is accepted.

1 19. A method of communicating in a packet radio service network wherein a
2 wireless communication device has a packet data protocol (PDP) address for
3 establishing a plurality of communication sessions with the packet radio service
4 network, wherein the packet radio network provides communications at a first quality
5 of service level during a first of the communication sessions, and communications at
6 a second quality of service level during a second of the communication sessions, the
7 method comprising:
8 providing a cost estimate to a user of the wireless communication device for
9 the communication session to communicate during the first of the communication
10 sessions based on a quantity of information; and
11 communicating during the first of the sessions at the first quality of service
12 level when the cost estimate is accepted.

1 20. The method as claimed in claim 19 further comprising initiating a
2 communication session with the packet radio service network when the cost estimate
3 does not exceed an available user balance stored within a smart card readable by the
4 wireless communication device.

1 21. The method as claimed in claim 19 wherein the cost estimate is a first cost
2 estimate, the method further comprising:
3 providing a second cost estimate to the user for the communication session to
4 communicate during the second of the communication sessions when the user rejects
5 the first cost estimate; and
6 communicating during the second communication session at the second
7 quality of service level when the user accepts the second cost estimate.

1 22. A wireless communication device comprising:
2 a memory to store a quality of service level;
3 a processor to determine a cost estimate of a communication session based on
4 the quality of service level and a quantity of information to be communicated; and
5 a transceiver to initiate the communication session with a packet radio service
6 network when the cost estimate is accepted.

1 23. The wireless communication device as claimed in claim 22 wherein the
2 quality of service level is a first quality of service level, and wherein the cost estimate
3 is a first cost estimate, the wireless communication device further comprising an
4 input/output element to provide the first cost estimate of the communication session
5 to a user of a wireless communication device, to allow the user to select a second
6 quality of service level for the communication session when the first cost estimate is
7 not accepted, and to provide a second cost estimate of the communication session to
8 the user based on the second quality of service level and the quantity of information,
9 and

10 wherein the processor to cause the transceiver to initiate the communication
11 session when the second cost estimate is accepted.

1 24. The wireless communication device as claimed in claim 22 wherein the
2 network capabilities comprise available quality of service levels and cost of service
3 information, and

4 the processor to estimate a content amount to determine the quantity of
5 information to be communicated, and to determine the cost estimate based on the
6 content amount and cost of service information for an available quality of service
7 level corresponding with the quality of service level stored in the memory.

1 25. The wireless communication device as claimed in claim 22 further
2 comprising an interrogator to interrogate a plurality of communication networks to
3 determine available quality of service levels and cost of service information for each
4 of a plurality of communication networks available to the wireless communication
5 device.

1 26. The wireless communication device as claimed in claim 22 wherein the
2 processor compares user credit availability information stored on a smart card
3 readable by the wireless communication device with the cost estimate for the
4 communication session, and causes the transceiver to initiate the communication
5 session when the cost estimate is not greater than the user credit availability
6 information.

1 27. The wireless communication device as claimed in claim 22 wherein the
2 processor compares user credit availability information with the cost estimate for the
3 communication session, causes the transceiver to initiate the communication session
4 when the cost estimate does not exceed a predetermined percentage of the user credit
5 availability information, causes the transceiver to refrain from initiating the
6 communication session when the cost estimate exceeds the user credit availability

7 information, notifies a user when the cost estimate exceeds the user credit availability
8 information, and allows the user to select a different quality of service level for the
9 communication session when the cost estimate exceeds the user credit availability
10 information.

1 28. The wireless communication device as claimed in claim 22 wherein a
2 wireless communication device is assigned a packet data protocol (PDP) address for
3 communicating during a plurality of communication sessions with the packet radio
4 network, the quality of service level is a first quality of service level, and wherein the
5 packet radio network provides communications at the first quality of service level
6 during a first of the communication sessions, and communications at a second quality
7 of service level during a second of the communication sessions,

8 wherein the transceiver communicates at the first quality of service level
9 during the first of the communication sessions, and communicates at the second
10 quality of service level during the second of the communication sessions.

1 29. The wireless communication device as claimed in claim 28 wherein the
2 first quality of service level has a first cost of use associated therewith, and the second
3 quality of service level has a second cost of use associated therewith, and wherein the
4 processor provides the cost estimate for the first of the communication sessions to
5 communicate a first content type based on the first cost of use and a quantity of
6 information of the first content type.

1 30. A computer readable medium having program instructions stored thereon
2 for performing a method of initiating a communication session with a communication
3 network when executed within a wireless communication device, the method
4 comprising:

5 determining a first cost estimate of the communication session based on a first
6 quality of service level and a quantity of information to be communicated; and
7 initiating the communication session when the cost estimate is accepted.

1 31. The computer readable medium as claimed in claim 30 wherein the quality
2 of service level is a first quality of service level, and wherein the cost estimate is a
3 first cost estimate, and wherein the program instructions configure the wireless
4 communication device to:
5 provide the first cost estimate of the communication session to a user of the
6 wireless communication device;
7 allow the user to select a second quality of service level for the
8 communication session when the first cost estimate is not accepted;
9 provide a second cost estimate of the communication session to the user based
10 on the second quality of service level and the quantity of information; and
11 initiate the communication session when either the first or second cost
12 estimate is accepted.

1 32. The computer readable medium as claimed in claim 30 wherein the
2 programming instructions configure the wireless communication device to:
3 receive data corresponding to the quality of service level desired by a user;
4 and
5 determine network capabilities from the communication network, the network
6 capabilities comprising available quality of service levels and cost of service
7 information,
8 and wherein determining the cost estimate includes estimating a content
9 amount to determine the quantity of information to be communicated, the cost
10 estimate being based on the estimated content amount and cost of service information
11 for an available quality of service level substantially corresponding with the data
12 received by the user.

1 33. The computer readable medium as claimed in claim 30 wherein the
2 programming instructions configure the wireless communication device to:

- 3 compare user credit availability information with the cost estimate for the
- 4 communication session; and
- 5 initiate the communication session when the cost estimate is not greater than a
- 6 predetermined percentage of the user credit availability information.